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EXAMINER

HARDEE, JOHN R

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte CARRIE DELCOMYN
and MICHAEL HENLEY

Appeal 2008-2111
Application 10/693,194
Technology Center 1700

Decided: May 7, 2008

Before BRADLEY R. GARRIS, CHARLES F. WARREN, and
KAREN M. HASTINGS, *Administrative Patent Judges*.

GARRIS, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants appeal under 35 U.S.C. § 134 from the Examiner's decision rejecting claims 8, 10, 12-14, 21-23, 25-27, 34-36, and 38-40. We have jurisdiction under 35 U.S.C. § 6.

We AFFIRM.

Appellants claim a composition comprising about 0.1-40% w/v oxidant, about 0.1-40% w/v halide, about 0.05-20% w/v buffer, and water (claim 8). The composition is disclosed as generating *in situ* a reactive species which effects chemical and/or biological degradation of toxic substances (Spec. paras. [0017], [0024]).

Representative claim 8 reads as follows:

8. A composition comprising:

one or more oxidants, at least one of which is selected from the group consisting of: a monopersulfate compound in the forms derived from alkali metal salt of peroxymonosulfuric acid alone or in combination with the alkali metal salts of sulfuric or persulfuric acid; perborate; peracetate; percarbonate; hydrogen peroxide; and dioxirane compounds, wherein said oxidants are present in the composition in a concentration range of about 0.1-40% w/v;

one or more halides, at least one of which is selected from the group consisting of an alkali metal and an alkaline earth or transition metal halide salt, wherein said halides are present in the composition in a concentration range of about 0.1-40% w/v;

a buffer selected from the group consisting of alkali metal salt forms of carbonate and bicarbonate, capable of bringing the composition to a pH in the range of about 4 to about 10, wherein said buffer is present in the composition in a concentration range of about 0.05-20% w/v; and

water.

The reference set forth below is relied upon by the Examiner as evidence of obviousness:

Willey

US 2001/0008879 A1

Jul. 19, 2001

All of the claims on appeal are rejected under 35 U.S.C. § 103(a) as being unpatentable over Willey. It is the Examiner's undisputed finding that Willey discloses bleach compositions which may contain a wide variety of ingredients including each of the ingredients at the concentrations required by the claim 8 composition. According to the Examiner, it would have been obvious for one with ordinary skill in this art to formulate a composition containing these last mentioned ingredients and concentrations in view of Willey's teaching that these ingredients and concentrations are suitable for inclusion in patentee's bleaching composition (Ans. 3).

Appellants argue that Willey teaches away from the Examiner's proposed combination because the resulting composition would generate hypohalite which is expressly excluded from the compositions of Willey (Willey, para. [0314]; App. Br. 9-12, Reply Br. 5-6).

The deficiency of this argument is that it presumes the combination of ingredients proposed by the Examiner and defined by claim 8 will necessarily generate a hypohalite. The record before us contains no evidentiary support for such a presumption. Certainly, Willey contains no teaching or suggestion that the ingredients under consideration would necessarily react to form a hypohalite, and Appellants do not argue otherwise. More significantly, the subject Specification expressly teaches that hypohalite is only one of a number of possible products generated by Appellants' composition formulation.

For example, the Specification discloses: "A preferred embodiment of the present invention is inclusive of a formulation example that provides for

the *in situ* generation of powerful oxidative active chlorine species such as in the form of hypochlorous acid and/or hypochlorite species" (Spec. 4, para. [0011]; emphasis added). This disclosure teaches that, even in a preferred embodiment, Appellants' compositional formulation may generate a number of active chlorine species such as either hypochlorous acid or hypochlorite species. A corresponding teaching appears in the disclosure: "When the formulation of the disclosed invention comprises a chloride halide salt and a suitable buffer, active chlorine species are generated *in situ*, including but not limited to hypochlorite and/or hypochlorous acid" (Spec. 10-11, para. [0031]; emphasis added).

In light of Appellants' Specification disclosure, we find that the composition defined by appealed claim 8 will not necessarily generate hypochlorite as implicitly presumed by Appellants in making the argument under consideration. It is clear from the teachings of Appellants' Specification that the claim 8 composition may generate an active chlorine species other than hypochlorite, such as hypochlorous acid. Likewise, the corresponding composition resulting from the Examiner's proposed combination of ingredients disclosed by Willey would not necessarily generate hypochlorite as presumed by Appellants.

These circumstances lead us to determine that, even if Willey teaches away from hypohalite as urged by Appellants, such a teaching does not militate against an obviousness conclusion. Again, this is because no basis exists for expecting that the combination of ingredients proposed by the Examiner and required by claim 8 would necessarily generate a

hypochlorite. To the contrary, Appellants' Specification clearly and repeatedly teaches that hypochlorite would not necessarily be generated by such a combination of ingredients. On the other hand, an obviousness conclusion is well supported by the Examiner's undisputed finding that the ingredients and concentrations required by claim 8 are disclosed in the Willey patent as acceptable for use in patentee's composition. *See Merck & Co. v. Biocraft Labs.*, 874 F.2d 804, 807(Fed. Cir. 1989) (the disclosure of a multitude of effective combinations does not render any particular formulation less obvious).

The foregoing reasoning also applies to independent claim 21. This claim, unlike independent claim 8 discussed above (or remaining independent claim 34), contains the recitation "wherein the oxidants, halides, and buffers are present in sufficient amounts to generate hypochlorite species in solution." However, this recitation does not require that the claim 21 ingredients must generate hypochlorite species. Instead, the recitation merely requires that the ingredients are present in amounts such that generation of hypochlorite is possible. For the reasons expressed previously, the Specification disclosure makes clear that such ingredient amounts may also generate other active chlorine species such as hypochlorous acid. Therefore, claim 21, like claim 8, defines a composition which would not necessarily generate hypochlorite.

Even if claim 21 were interpreted to require generation of hypochlorite species, the claim contains no requirement as to the quantity of such species which must be generated. As a consequence, this claim would

be satisfied by a composition of the recited ingredients even if the ingredients generated hypochlorite species only in negligible amounts. This is significant because we do not believe (and Appellants do not specifically argue) that Willey's disclosure teaches away from a negligible quantity of hypohalite. In our view, an artisan simply would not have considered such a negligible quantity as having any consequence with respect to the compositions of Willey.

For the above stated reasons, we sustain the Examiner's § 103 rejection of all appealed claims as being unpatentable over Willey.

The decision of the Examiner is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED

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